

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Previously Presented) A printing apparatus including a carrier ribbon supply spool and a carrier ribbon take-up spool, a print head having a plurality of heating elements which are individually addressable and energisable selectively to remove pixels of marking medium from the carrier ribbon during a printing operation, a first motor which when the printing apparatus is operated in a first configuration, moves the print head during a printing operation relative to a substrate on which an image is to be printed, and when the apparatus is operated in a second configuration, the first motor moving the carrier ribbon relative to the print head during a printing operation, and there being a second motor which is operative when the printing apparatus is operated in the first and second configurations to advance carrier ribbon from which pixels of marking medium have been removed in a previous printing operation, onto the carrier ribbon take-up spool, the printing apparatus being configurable to either of the first and second configurations.

2. (Previously Presented) An apparatus according to claim 1 wherein the first motor moves the print head when operated in the first configuration and the carrier ribbon when operated in the second configuration, via a transmission, the carrier ribbon being disconnected from the transmission in the first configuration and the print head being disconnected from the transmission in the second configuration.

3. (Previously Presented) An apparatus according to claim 2 wherein the transmission includes a rotary to linear drive transfer mechanism whereby in the first configuration the print head is carried by a linearly movable part so as to be moved linearly during a printing operation along the carrier ribbon [(14)], and in the second configuration the carrier ribbon is entrained

around guides on the linearly movable part and around immovable guides so that as the linearly movable part moves during a printing operation, the carrier ribbon is moved relative to the print head.

4. (Previously Presented) An apparatus according to claim 3 wherein when the printing apparatus is operated in the second configuration, and the substrate moves relative to the print head in a first direction, the linearly movable part is moved in a second linear direction opposite to the first direction to move the carrier ribbon in the same direction as the substrate and vice versa, and where the substrate moves in the first direction, inbetween printing operations, a length of the carrier ribbon is moved past the print head which is generally equal to the length of carrier ribbon used in the preceding printing operation plus the length of carrier ribbon to be used for the next printing operation.

5. (Previously Presented) An apparatus according to claim 4 wherein when the substrate moves relative to the print head in a second direction opposite to the first direction, inbetween printing operations the carrier ribbon is generally stationary relative to the print head.

6. (Previously Presented) An apparatus according to claim 5 wherein there is a peeler device associated with the print head which is operable to assist in the removal of pixels of marking medium from the carrier ribbon and when the apparatus is operated in the second configuration and the carrier ribbon and substrate are moved in the first direction relative to the print head during a printing operation the print head and associated peeler device are positioned in a first position such that the carrier ribbon is entrained about the peeler device so as to pass over the peeler device during a printing operation subsequent to passing the print head, and when the apparatus is operated in the second configuration and the carrier ribbon and substrate are moved in the second direction relative to the print head during a printing operation the print head and associated peeler device is positioned in a first position such that the carrier ribbon is entrained about the peeler device so as to pass over the peeler device during a printing operation subsequent to passing the print head.

7. (Previously Presented) An apparatus according to claim 1 wherein the second motor is coupled to the take-up spool via an overdrive clutch and the second motor drives a drive roller around which the carrier ribbon is entrained, whereby the carrier ribbon may be advanced onto the take-up spool when the drive roller is driven.

8. (Previously Presented) An apparatus according to claim 1 wherein the supply and take-up spools, and guides which guide the carrier ribbon at least partially along a carrier ribbon feed path are mounted on a base, and a transmission which includes a rotary to linear drive transfer mechanism is also mounted on the base whereby in the first configuration the print head is carried by a linearly movable part, the apparatus being re-configurable from the first to the second configuration by disconnecting the transmission from the print head, fixing the print head relative to the base, and entraining carrier ribbon around guides on the linearly movable part and around guides which are immovable relative to the base.

9. (Previously Presented) A printing apparatus according to claim 1 wherein when the apparatus is operated in at least the first configuration, the print head is moved towards the adjacent carrier ribbon and substrate during printing to urge the carrier ribbon towards the substrate, and the print head is moved away from the carrier ribbon and substrate after printing, and wherein the print head movement towards and away from the carrier ribbon is achieved as the print head is moved by the first motor by mechanical guide means including a cam and track.

10. (Previously Presented) A printing apparatus including a carrier ribbon supply spool and a carrier ribbon take-up spool, a print head having a plurality of heating elements which are individually addressable and energisable selectively to remove pixels of marking medium from the carrier ribbon during a printing operation, a first motor to move the carrier ribbon relative to the print head during a printing operation, and a second motor to advance carrier ribbon from which pixels of marking medium have been removed in a previous printing operation, onto the carrier ribbon take-up spool, wherein the carrier ribbon is moved past the print head inbetween printing operations to advance used ribbon onto the take-up spool in a direction opposite to the direction the ribbon is moved during a printing operation, and inbetween printing operations, a

carrier ribbon length is advanced past the print head generally equal to the length of carrier ribbon used in the preceding printing operation plus the length of carrier ribbon to be used for the next printing operation.

11. (Previously Presented) A printing apparatus according to claim 10 wherein the printing apparatus is configurable alternatively in first and second configurations and in the first configuration the first motor, during printing, moves the print head relative to a substrate on which an image is to be printed, and in the second configuration the first motor, during printing, moves the carrier ribbon relative to the print head.

12. (Previously Presented) A printing apparatus including a carrier ribbon supply spool and a carrier ribbon take-up spool, a print head having a plurality of heating elements which are individually addressable and energisable selectively to remove pixels of marking medium from the carrier ribbon during a printing operation, a first motor to move the carrier ribbon relative to the print head during a printing operation, and a second motor to advance carrier ribbon from which pixels of marking medium have been removed in a previous printing operation, onto the carrier ribbon take-up spool wherein in a first mode of operation when the substrate moves relative to the print head during a printing operation in a first direction, the carrier ribbon moves in the same direction as the substrate, and in a second mode of operation when the substrate moves relative to the print head during a printing operation in a second direction, the carrier ribbon moves in the same direction as the substrate, and in the first mode of operation where the substrate moves in the first direction during a printing operation, inbetween printing operations, a length of the carrier ribbon is advanced past the print head which is generally equal to the length of carrier ribbon used in the preceding printing operation plus the length of carrier ribbon to be used for the next printing operation, and in the second mode of operation when the substrate moves relative to the print head in a second direction during a printing operation, inbetween printing operations the carrier ribbon is generally stationary relative to the print head.

13. (Previously Presented) A printing apparatus according to claim 12 wherein the printing apparatus is configurable alternatively in first and second configurations and in the first

configuration the first motor, during printing, moves the print head relative to a substrate on which an image is to be printed, and in the second configuration the first motor, during printing, moves the carrier ribbon relative to the print head.

14. (Canceled)

15. (Canceled)

16. (Previously Presented) A method of printing using a printing apparatus including a carrier ribbon supply spool and a carrier ribbon take-up spool, a print head having a plurality of heating elements which are individually addressable and energisable selectively to remove pixels of marking medium from the carrier ribbon during a printing operation the carrier ribbon being movable relative to the print head during a printing operation, and there being a motor to advance carrier ribbon from which pixels of marking medium have been removed in a previous printing operation, onto the carrier ribbon take-up spool wherein the method includes moving the substrate relative to the print head during a printing operation in a first direction, and moving the carrier ribbon in the same direction as the substrate, and moving the carrier ribbon inbetween printing operations in a second opposite direction, the method including, inbetween printing operations, advancing a length of the carrier ribbon past the print head which is generally equal to the length of carrier ribbon used in the preceding printing operation plus the length of carrier ribbon to be used for the next printing operation.

17.-19. (Canceled)